

Domestic and stock pipelines

This fact sheet provides information on service and infrastructure on some of GMW's other pipelines.

GMW will work with the local community and stakeholders to ensure they determine a preferred option for a domestic and stock pipeline supply for Mitiamo district.

Consultation will be critical to understand community and stakeholder needs and expectations and to consider environmental and cultural heritage impacts and benefits.

It is only when the community and stakeholders have agreed on a pipeline design, that we will be able to detail costs, including ongoing fees and tariffs.

Service

How we determined pipeline size in other areas.

In the East Loddon Pipeline District the estimated daily and annual water demands per property were calculated as follows:

House (occupied)

- Peak (summer) Day - 7,000 litres per house
- Annual - 1.73 megalitres/per house (1 megalitre = 1 million litres)

The allocation of a maximum of 7,000 litres per day is equivalent to the demand assumptions that were also applied in the design of the major Wimmera Mallee Pipeline project in north-western Victoria.

The 7,000 litres per day allocation is also used in several other existing GMW schemes as it meets typical house and garden requirements in the region.

The approximate breakdown of this household summertime daily usage typically occurs as follows:

- 1,000 – 1,500 litres personal use (washing, showers, etc.)
- 500 - 750 litres cooling (evaporation system cooling)
- 3,500 – 4,750 litres per day for garden use.

How we calculated appropriate flow rates to meet stock demand at our existing pipelines

At GMW's East Loddon pipeline flow rates were based on a range of data including consumption of dry sheep and lactating ewes and lambs.

The figure of 13.7 litres per ha per day is based on an upper limit value of 3.2 dry sheep equivalent (DSE) per hectare (assumes a stocking rate of 50 per cent), which is at the high end of recorded stocking rates in the region.

- Peak (summer) Day - 13.7 litres per hectare
- Annual - 3,021 litres per hectare (=0.003 megalitres/ha/year).

How GMW has determined water requirements for spraying in other piped districts

Spraying typically requires between 50 to 80 litres per hectare, depending on the equipment used.

During crop spraying, tanks will typically be drawn down more rapidly for a short period.

The on-farm storage requirement of four peak summer days, combined with normal tank recovery by pipeline filling, is normally sufficient to meet any short-term spraying requirements.

Determining the number of tapping points

GMW installs one tapping per 256 hectares (640 acres) plus one tapping per additional part thereof.

Extra tapings can be provided on request – a connection fee and an annual charge applies.

Each tapping point was piped directly into a storage tank with no en-route usage.

In GMW's piped districts reserve and standby capacity for emergency failure was provided by landowners in the form of on-farm storage.

This is four days of peak summer demand.

Design/Works

Pipeline construction

In the East Loddon Pipeline District the pipeline has been laid within private property a few metres inside the property fence.

Pipes were placed in open trenches, or direct bored into the ground. During construction we ensured any large and sharp pieces of earth or other material were not pressing against the pipe, risking damage.

Customer meters are located adjacent to the fence line, above the ground.

Environment and heritage values

The various environmental values within the system (species, communities, assets and activities) are identified during planning a pipeline scheme layout.

GMW's design approach must include a structured methodology of avoiding, minimising, and mitigating any potential environmental and heritage impacts identified during project planning.

All contractors and employees are required to undertake appropriate training to familiarise them with any issues at hand in the works footprint.

Costs to customers

It's important to understand in all of GMW's piped districts there are costs that are not funded by GMW or the project. A basic farm water distribution network – including storage tanks, pipes (from tanks to troughs), and troughs would all be at the cost of the customer.

Tanks and troughs must be automatic-filling. This equipment is commonly available through rural suppliers.



Construction and trenching during the build of the Cosgrove pipeline and the Cosgrove pump station